



हेमवती नंदन बहुगुणा गढ़वाल विश्वविद्यालय
Hemvati Nandan Bahuguna Garhwal University
श्रीनगर गढ़वाल, उत्तराखण्ड - 246174
Srinagar Garhwal (Uttarakhand) - 246174
केंद्रीय विश्वविद्यालय
(A Central University)

Global Tender Enquiry (GTE) for
Supply and installation of Liquid Chromatography-Mass Spectrometry

Tender Enquiry No: HNBGU/SP/ET/LC_MS/02

Dated: 08/09/2025

Hemvati Nandan Bahuguna Garhwal University
(A Central University)
Srinagar Garhwal, Uttarakhand, 246174

1. Notice Inviting Quotation (E-Procurement Mode)

Notice Inviting *Global Tender* for Procurement of **Liquid Chromatography-Mass Spectrometry**

Hemvati Nandan Bahuguna Garhwal University (HNBGU) (A Central University) invites tenders from interested vendors for the procurement of the above-mentioned item.

Vendors are requested to submit their bid for the supply of the above item as per details technical specification given and Price Bid as per BOQ.

The important information related to the tender is as follows:

SCHEDULE	
Date of Issue/Publishing	08 Sep. 2025
Document Download/Sale Start Date	08 Sep. 2025
Seek Clarification Start Date	10 Sep. 2025
Seek Clarification End Date	14 Sep. 2025
Last Date and Time for Uploading of Bids	29 Sep. 2025
Date & Time of Opening of Technical Bids	30 Sep. 2025
Tender Fee (Non-Refundable) (In Rs.)	(Rs. 5000 + GST)
Estimated Tender Value (In Rs.)	Rs. 2,40,00000 (Inclusive of all the charges and GST)
EMD (In Rs.)	(Rs. 7,20,000) Bidder must submit EMD through Demand Draft in favor of “Finance Officer, HNBGU” payable at Srinagar Garhwal UK
Performance Security	5% of the contract value valid till the warranty period
Warranty	Minimum 6 Years of comprehensive warranty from the date of installation or successful acceptance by HNBGU.
Delivery	60 Days
No. of submissions (1/2/3/4)	02 (one technical and one financial)
Bid Validity days	120 Days
Email Address (for Technical Clarifications)	hemwati.nandan.physics@gmail.com; ramsahu79@gmail.com; rohitmahar4u@gmail.com; digarsingh2022@gmail.com; skuphysics@gmail.com; garvpharma29@gmail.com

2. Instructions to Bidders

Instructions for Online Bid Submission:

Department of Expenditure has issued the directive to publish the tender document on the Central Public Procurement Portal (CPP) at <https://eprocure.gov.in/eprocure/app>. The bidders are required to submit soft copies of their bids electronically on the CPP Portal using valid Digital Signature Certificates. Below mentioned instructions are meant to guide the bidders for registration on the CPP Portal, prepare their bids in accordance with the requirements, and submit their bids online on the CPP Portal. For more information, bidders may visit the CPP Portal at <https://eprocure.gov.in/eprocure/app>. The tender document *can also be* downloaded from the HNBGU website at <https://www.hnbggu.ac.in/>

2.1. Registration Process

- a) Bidders to enroll on the e-Procurement module of the portal <https://eprocure.gov.in/eprocure/app> by clicking on the “Click here to Enroll” link. Enrollment on the CPP Portal is free of charge.
- b) The bidders choose a unique username and assign a password for their accounts. Bidders are advised to register their valid email addresses and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- c) Bidders to register upon enrolment their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India with their profile.
- d) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible for ensuring that they do not lend their DSCs to others which may lead to misuse. Foreign bidders are advised to refer to “DSC details for Foreign Bidders” for Digital Signature requirements on the portal.
- e) Bidder then logs in to the site through the secured login by entering their user ID / password and the password of the DSC / eToken.

2.2. Tender Documents Search

- a) Various built-in options are available in the CPP Portal to facilitate bidders to search active tenders by several parameters. These parameters include Tender ID, organization, location, date, value, etc.
- b) There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal.
- c) Once the bidders have selected the tenders they are interested in; they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- d) The bidder should make a note of the unique Tender ID assigned to each tender; in case they want to obtain any clarification / help from the Helpdesk.

2.3. Bid Preparation

- a) The bidder should take into account any corrigendum published on the tender document before submitting their bids.
- b) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid.

- c) Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- d) The bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document /schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 100 dpi with black and white option.
- e) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Space” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

2.4. Bid Submission

- a) Bidder to log into the website well in advance for bid submission so that he/she could upload the bid in time *i.e.* on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- b) The bidder to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- c) Bidder must submit EMD through Demand Draft in favor of “Finance Officer, HNBGU” payable at Srinagar Garhwal UK-246174
- d) A standard BOQ format has been provided with the tender document to be filled in by all the bidders. Bidders to note that they should necessarily submit their financial bids in the prescribed format, and no other format is acceptable.
- e) The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- f) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data, which cannot be viewed by unauthorized persons until the time of bid opening.
- g) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- h) Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- i) Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

2.5. Assistance to Bidders

- I. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- II. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is 1800 2337315.

2.6. General Instructions to the Bidders

- a) The tenders will be received online through portal <https://eprocure.gov.in/eprocure/app>. In the Technical Bids, the bidders are required to upload all the documents in portable document format (PDF).
- b) Possession of Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card Token in the company's name is a prerequisite for registration and participating in the bid submission activities through <https://eprocure.gov.in/eprocure/app>. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site <https://eprocure.gov.in/eprocure/app> under the link "Information about DSC". The bidders are advised to follow the instructions provided in the "Instructions to the Bidders" for the e- Submission of the bids online through the Central Public Procurement Portal for e-Procurement at <https://eprocure.gov.in/eprocure>.

3. Online Bid Submission

**** All the pages of the technical bid must be properly numbered and supporting page numbers should be mentioned in the COVER – 1, failing which bid will be rejected.**

The bids (complete in all respect) must be uploaded online in **two** Covers as explained below.

Cover – 1 (Following documents to be provided)				
Ser.		Content	Supporting Page Number of bid	File Types
1	Technical Bid	Proof of payment of EMD.		.PDF
2		Copy of GST Certificate and PAN.		.PDF
3		Compliance Sheet (Annexure-I) (Detailed Catalogue/Literature of the relevant item/product must be attached to the bid)		.PDF
4		Non-Blacklisting of Suppliers as per Annexure-II		.PDF
5		Bidder Must have 3 years of experience of supply of similar equipment's in reputed IITs/NITs/Central Universities and reputed institutions. All the details are filled in Annexure III and supporting Purchase Order's be attached. Only experience of the supply of similar equipment will be considered. The bidders who do not satisfy this condition will have their bids rejected.		.PDF
6		Declaration of Local Content (Annexure-V)		.PDF
7		Price reasonability certificate (Annexure VI)		.PDF
8		Dealers participating in the tender should submit the Manufacturer's Authorization Form from OEM, and in case OEM is participating in the bid, OEM should submit proof of ownership. (Annexure-VII)		.PDF
9		All supplied items should be covered under warranty as mentioned in the tender document. Warranty service should be provided onsite at HNBGU for the duration of the warranty period. (Written assurance certificate must be provided on the letterhead of OEM/Dealer)		.PDF
10		Un-priced Bid (Annexure A)		.PDF

Cover - 2			
Ser.	TYPES	Content	File Type
1.	Financial Bid	Price bid as per BOQ format only. <i>(Note: -Comparison of prices will be done ONLY on the bids submitted for the Main Equipment and accessories. Anything asked as 'Optional' in the specifications is not to be included for overall comparison)</i>	.XLS

FINANCIAL BID (PRICE-BID): Bidder has to quote separately for all the fields as mentioned in the Price Schedule. Adding 0 'Zero' shall be treated as unresponsive. Bids will be accepted only in online mode through the portal. Bids submitted by any other means will not be accepted.

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4. Invitation for Tender Offers for Procurement of Liquid Chromatography-Mass Spectrometry.

Hemvati Nandan Bahuguna Garhwal University (A Central University) invites online Bids (Technical bid and Commercial bid) from eligible and experienced OEM (Original Equipment Manufacturer) OR OEM Authorized Dealers for Procurement, of the above-mentioned item with an on-site comprehensive warranty (warranty period as stated at “Schedule”) from the date of receipt of the material as per terms & conditions specified in the tender document, which is available on CPP Portal <https://eprocure.gov.in/eprocure/app>.

General Instructions:

- Vendors will have to make arrangements for all of the other essential accessories for the successful operation of the equipment.
- Installation certificate will be issued only after satisfactory working of the instrument (Demo of all the modules) & onsite training at HNB Garhwal University.
- Used or remanufactured or refurbished equipment/items will not be considered for award. The country of origin and year of manufacturing, makes and models should be clearly indicated for full LC-MS systems including accessories. The system should be upgradable in future as and when necessary.
- The vendors may note that the technical specifications provided in following para are minimum to be mandatorily met by the systems quoted by them.
- The vendors should highlight and specify any additional functionalities of their system that enhance the capabilities of the system or the ease with which the user can process and analyze the data and provide information about the value addition from such functionalities.
- All the quoted technical specifications must be verifiable from the manufacturer’s international website and published literature.
- The installation will be deemed completed only after demonstrating the performance features through the necessary Installation Qualification (IQ) and Performance (PQ) of all the modules supplied.
- Vendors should have good support and service centers located in India and elaborate the proposed service modalities for HNB Garhwal University. They should also confirm the availability of minimum essential spares for the next 10 years after installation.
- The vendors should provide relevant documents to demonstrate their relevant experience.
- The vendors should provide a detailed list of places where similar instrument has been satisfactorily functional for at least 3 years along with the contact details of the concerned scientist/faculty/officer in charge. They should also provide a letter of reference from such users.
- The quoted model should have at least 02 numbers of installations in India; else the vendor is ineligible. List of such users with copy of PO, contact numbers of faculty Incharge and copy of their installation report should be provided.

4.1. TECHNICAL SPECIFICATIONS

Liquid Chromatography – Mass Spectrometry

Quantity: 1 No.

S. No.	Item/Parameter	Description
	Ultra High-Performance Liquid Chromatography (UPLC)	
1.	Pump	<ul style="list-style-type: none"> Must be an Ultra-High-Pressure quaternary gradient pump with an integrated degasser, autosampler, and column oven. Automatic purging of pumps should be software-controlled. The pump should be capable of mixing and delivering solvents at an operating pressure of 11000 psi or better. The flow range must be 0.001-2 mL/min in 0.001 mL increments. Flow rate precision: 0.075% RSD or better Composition precision: ± 0.3 % RSD or better Composition accuracy: ± 0.7 % absolute Specify the number of ports and column switching valves for handling the columns simultaneously. The higher the number of ports per valve, the better.
2.	Auto Sampler	<ul style="list-style-type: none"> Must be capable of holding at least 90 samples of 1.5/2 mL capacity or better. Must have cooler to control till 4°C Carryover: $\leq 0.005\%$ or better Leak sensors and automatic rack and vial recognition should be provided in each module for safety.
3.	Alternate Inlet System or Syringe Pump-Based Inlet	<ul style="list-style-type: none"> The LC and MS should be capable of running Stand-Alone i.e., MS with or without autosampler can be used while no chromatography is performed. A syringe pump-based inlet system with optimum pumping speed is needed to deliver the sample to MS. Whatever spare parts are required must be supplied. Specify if LC has an in-built alternate inlet system for delivering the samples to run MS Stand-Alone.
4.	Column Oven	<ul style="list-style-type: none"> Four or more columns with guard columns can be installed at a time and should be easily switchable during the multiple sample run. The column temperature range should be less than 10 °C to 60 °C or better. Should have programmable temperature increments and high stability during the run.
5.	PDA Detector	<ul style="list-style-type: none"> Should be provided with a standard flow cell Light Source: Lamp with minimum (2000 hr Warranty) Wavelength Range: 190nm – 600 nm or higher Maximum sampling rate 60 Hz or better Number of photodiodes: 512 or more Standard flow cell volume of $<1\mu\text{l}$ for 10 mm path length or specify Specify cell temperature control range
6.	Injection volume	0.1 to 20 μL or better in 0.1 μL increment in partial or full loop mode.
7.	Calibration	Software-driven integrated calibrant delivery system + programmable divert valve, Automated Mass calibration and monitoring of instrument operation should be there IQ/OQ of the system should be quoted.
	Ion sources and HRMS with MS/MS/QTOF (Quadrupole with Time of Flight) MS system	

8.	Mass Analyzer	The Mass Analyzer should be equipped with a quadrupole analyzer and collision cell followed by a high-resolution time-of-flight mass analyzer system. Or any other equivalent HRMS technology with the MS/MS capabilities.
9.	Vacuum system	A suitable vacuum system with preferably one backup pump and turbo pump is needed to operate the instrument. An isolation valve must be fitted to the system to allow the source elements to be cleaned without breaking the instrument vacuum, maximizing instrument uptime. Normal operation and maximize the sensitivity of the instruments, vacuum should be optimum.
10.	Ion Source	It must have dedicated ESI sources that allow positive and negative ion detection. The source should be from the OEM and should be easily changed by the user without breaking Vacuum. ESI flow rate compatibility should be up to 2.0 mL/min or better. The source desolvation temperature should be ≥ 400 °C.
11.	Mass Accuracy	1 ppm or better for MS mode and 2 ppm or better in MS/MS mode on 10 consecutive repeat measurements.
12.	Mass Range	<ul style="list-style-type: none"> Quadrupole or any other equivalent Unit Mass resolution Analyzer mass range: up to 3000 m/z or better HRMS/TOF Mass range: ≤ 50 to 10,000 m/z or better.
13.	Resolution	<ul style="list-style-type: none"> For HRMS/Q-TOF, the resolution should be $\geq 40,000$ FWHM for a wide m/z range and 55,000 FWHM or higher at select m/z values, while maintaining sensitivity. (It must be published on the technical brochure of the quoted model). Higher-resolution values can also be used as a clear performance metric to define the technical specifications of the HRMS/Q-TOF.
14.	Linear Dynamic Range	In-scan dynamic range on co-eluting components should be of 4 orders or better.
15.	Sensitivity	<ul style="list-style-type: none"> The instrument should have picogram level sensitivity and needs to mention the sensitivity based on 1 pg reserpine or any suitable reference standard in all modes of analyses (positive and negative and MS and MS/MS modes) at its highest resolution. The sensitivity should be 1500:1 or better in MS/MS mode and 500:1 or better in MS mode while maintaining the maximum resolution.
16.	Data Acquisition	<ul style="list-style-type: none"> Qualitative and quantitative analysis in ESI Source. The system should be able to perform MS and MS/MS together in the same run. Fast data acquisition (≥ 25 spectra/sec or better) in MS and MS/MS mode. The software should be capable of data acquisition whereby high and low collision energy data is acquired to provide fragmentation data for all detectable molecular ions in a single run. The instrument should have variable collision energy between low and high energy in the collision cell.
17.	Scan Functions	<ul style="list-style-type: none"> The system must have full Scan MS, MS/MS. Should have a data acquisition process where both HRMS/TOF MS full scan data and MS/MS fragments are continuously generated in two independent, rapidly alternating data channels.
18.	Auto-Tune and Calibration	<ul style="list-style-type: none"> The system should be capable of automated tuning of parameters across the system and calibrate itself for correct result output. Flexible automated optimization for small/labile molecule analysis should be present so that the system can be utilized for screening very small to large

		metabolites and contaminant residues without having to compromise in resolution or sensitivity.
19.	Polarity Switching	The system should be able to switch between a positive and negative mode in a single run
20.	Temperature stability	It should maintain mass accuracy even at temperature fluctuation.
21.	Reference mass introduction	Capable of internal reference mass correction without losing sensitivity.
Data Management System and software tools		
22.	Computer Platform	<ul style="list-style-type: none"> • Suitable latest-branded computer workstations preloaded at the manufacturing site with the software to ensure better connectivity and interfacing hardware and software for instrument control, data acquisition, and data processing. • 1 PC for processing (with the latest configuration as of date: Xeon or equivalent processor, 64 GB RAM, 8 TB SSD internal hard disk or better) computer workstations and all interfacing hardware and software for instrument control, data acquisition, data storage and data processing. • Software for data acquisition, process and control of Mass Spectrometry. • Automated MS to MS/MS switching capabilities. • All hardware and software, including drivers, laser printers, and workstations, should be quoted. • The computer must control the mass spectrometer and LC system in an integrated fashion. <p>Note: All the license copies of necessary software should be provided with perpetual license.</p>
23.	Integrated software to control MS and LC together	<p>a) Automated Tuning & mass calibration to analyze small molecules, fragile ions, and large molecules.</p> <p>b) Automated MS to MS/MS switching during a single run with user-selectable criteria</p>
24.	Auto Calibration	The Software shall be capable of Auto calibration.
25.	Software tools for Advanced Data Processing	<p>Screening, Component Identification, & Structural Elucidation workflows. The structure interpretation tool is mandatory. The software should also have the capability to assign structures by taking fragment ion spectra into account and automatically calculating fragments based on algorithms. Also, it should have the following functions:</p> <p>a) Effective data mining tools for complex samples should be able to extract chemically related compound while correlating isotopic fidelity & Mass Accuracy.</p> <p>b) Elemental formula generation capability and Compound Structure correlation with MS/MS data.</p> <p>c) All vendor needs to include specific, required software for Identification and verification, software to enable quick review of complex data sets, and Compound-based data browsing with dynamic links to spectra and chromatograms.</p> <p>d) The software should have a workflow for performing both semi-targeted (using the internal library) and non-targeted (using an External library such as ChemSpider or others) data processing.</p> <p>e) Software to automatically process complex chromatographic datasets composed of many components that may be incompletely separated from one another.</p> <p>f) All vendor needs to include specific, required s/w. Software to enable quick review of complex data sets Compound-based data browsing with dynamic links to spectra and chromatograms.</p> <p>g) Software should utilize a combination of advanced processing capabilities and powerful statistical and visualization tools to analyze complex MS data sets.</p>

		<ul style="list-style-type: none"> The software should have all statistical features inbuilt. It should provide targeted and untargeted batch feature extraction for mass spectrometric data. The software should have the features to construct & maintain the <i>in-house</i> spectral library from the data acquired in the host laboratory. <p>o) A tool to generate fast in silico spectral matches to accurately annotate MS/MS spectra.</p> <p>p) All perpetual software should be updated/upgraded time to time or whenever new release is there from the vendor for the next six years after the complete installation.</p> <p>q) All software should be supplied as perpetual licenses and can be installed on multiple computers for different users.</p>
26.	Library for HRMS	<ul style="list-style-type: none"> Comprehensive Spectral libraries like Metlin or other similar for Metabolomics should be quoted. The library should have a feature to freely update those molecules that are not available in the library.
	Gas Generator and Online UPS	
27.	Pre-Requisite for running the system	<p>Gas Generator: A suitable Branded Nitrogen gas generator within the built compressor at the required purity, pressure, and flow rate for the Mass Spectrometer must be quoted. All the required accessories, such as arrangements for all gas supplies through the gas generator and Cylinder with all accessories for sources, collision cell, etc., must be quoted for the proper functioning of the system. The Nitrogen gas generator should have Nitrogen Purity (99%), Flow Rate (up to up to 35 L/min), Outlet Pressure (80-120 psi), and Operating Temperature (5°C to 35°C), so that there is no compromise/fluctuation in the functioning/operations, data quality of LC-HRMS/UPLC-Q-TOF system. Vendors should provide a list of recent supply of the same high-quality Nitrogen Gas Generator (in the past 5 years) with model details and modules supplied. The Gas Generator should be supplied with 6 Years of warranty.</p> <p>Nitrogen Cylinders or Equivalent Cylinders: Two (02) Nitrogen Cylinders with all required accessories. The Purification panel and double-stage regulator should be properly installed with a 6-year warranty. (If needed for the functioning of the machine with LC-HRMS with MS/MS capabilities).</p> <p>Note: If other Gas (such as Argon) is required for Collision Cell, then supply Two (02) Cylinders of the required Gas with all required accessories. The Purification panel and double-stage regulator should be properly installed with a 6-year warranty. (If needed for the functioning of the LC-HRMS with MS/MS capabilities).</p> <p>Anti-vibration Table: Antivibration table with sufficient space for keeping the LC-MS including PC and must have plugs for UPS, instrument and associated accessories.</p>
28.	Online UPS	Online 10 KVA UPS (with stabilizer) with one-hour battery backup or better with 6 Years of warranty. Batteries should be included with standard warranty.
	Other Accessories & Consumables	
29.	Spares and Accessories for LC-HRMS	<ul style="list-style-type: none"> Vials: 1.5-2ml – 4000 No.s Vial Insert: 250 uL – 4000 No.s Syringe Filter: PTFE Filter, 13mm – 1000 No.s Syringe: – 1-10mL -1000 No.s Syringe: PTFE Filter, 13mm – 1000 No.s Lamps, Seals, Ferules, Tubing (metallic or plastic tubing), Valves, Nut and all other spares should be provided for proper installation of all columns and functioning of the instrument.

		<ul style="list-style-type: none"> All required traceable standards for Mass calibration and tuning, HPLC calibration should be provided. 5µl, 10µl, 20µl Loops, Vacuum pump oil, etc. and any other material required to make the instrument functional should be provided. The LC and MS should be capable of running Stand-Alone i.e., MS with or without autosampler can be used while no chromatography is performed. In such case whatever spare is required must be supplied.
30.	Columns	<ul style="list-style-type: none"> C8, (100 mm x 2.1 mm, 1.7 µm) column C18, (100 mm x 3 mm, 2.6 µm) column C18 (100 mm x 2.1 mm, 1.7 µm) column BEH C18 (100 mm x 2.1 mm, 1.7 µm) column or equivalent BEH C18 (50 mm x 2.1 mm, 1.7 µm column or equivalent ACE 18-pfp 100 mm x 2.1 mm, 2 µm column or equivalent HILIC LUNA 100mm x 3 mm x 3 µm Column or equivalent <p>Note: Supply guard columns with all of the above-mentioned columns.</p>
31.	Nitrogen Filters	Nitrogen Filters – 2 No. s
32.	Solvent Reservoir	Solvent Reservoir bottles with tubing and solvent-resistant cap (04)
33.	Waste containers	Solvent waste container with tubing and solvent-resistant cap (02)
34.	Calibration	Software-driven integrated calibrant delivery system + programmable divert valve, Automated Mass calibration and monitoring of instrument operation should be there IQ/OQ of the system should be quoted.
35.	Training	On-site training at the time of installation and further as and when required, with mutual understanding. At least 6 days of training after installation and refresher sessions after 6-12 months, as upgradation will be there. Free registration for vendor's user workshops/symposia/ seminars for the next 5 years.

4.2. Terms and conditions

1. Warranty: Six (06) years comprehensive warranty with unconditional preventive maintenance on a full system and all accessories is a must, including third-party items such as PC, Nitrogen generators, Gas purification panel and regulator and UPS, and the same must be mentioned in the quotation by the vendor or principal. All parts including spares should be covered under the warranty and this fact should be clearly and explicitly specified in the tender document. The comprehensive 6-year warranty should cover:

- Complete LC-HRMS, including probe, pumps, all accessories, spares and labor on site
- Free maintenance and service on site or at the factory with no cost, and
- Regular upgradation of software
- All third-party items such as PC, pump, syringe-pump, Nitrogen generator, Gas purification panel & regulator and UPS.
- No Purchase Order will be raised for purchasing any parts of the LC-QTOF or equivalent instrument under the six-year comprehensive warranty.

2. Single Vendor Solution: Both the Liquid Chromatograph and HRMS must be manufactured, supplied, and installed by a single/same vendor to provide seamless integration between the LC and MS. All other accessories should be supplied through a single vendor.

3. Service and Support: Both the Liquid Chromatography and High-Resolution Mass Spectrometer must be fully supported by the supplier for at least 10 years. Services and spares support need to be provided.

- 4. Specification Sheet:** A detailed specification sheet highlighting all the above specifications and all supportive documents need to be attached for all the claims in the specification mentioned
- 5. User Reference List:** Vendors should provide a list of recent installations (in the past 5 years) model details and modules supplied. Vendors should provide the performance certificates from the users (at least 3).
- 6. Spares:** The supplier should confirm the availability of spares for next 10 years from the date of installation.
- 7. Custom Clearance and Delivery:** The supplier must ensure the custom clearance and delivery of equipment at the premises (or installation site) of HN BGU. The HN BGU shall provide the bank release order and GST charges details.
- 8. Turnover Certificate:** The vendor must provide the turnover of the last three financial years to verify the financial standing.

5. GENERAL TERMS & CONDITIONS

- 5.1** All the pages of the technical bid must be properly numbered and supporting page numbers should be mentioned in the COVER – 1, failing which the bid will be rejected.
- 5.2 Due date:** The tender has to be submitted online on or before the due date. The offers received after the due date and time will not be considered.
- 5.3 EMD:** The Bidder must submit EMD through Demand Draft in favor of “Finance Officer, HNBGU” payable at Srinagar Garhwal UK
- 5.4 Refund of EMD:** The EMD will be returned to unsuccessful tenderers **only after the Tenders are finalized**. In case of a successful Tenderer, it will be retained till the successful and complete installation of the equipment.
- 5.5 Opening of the tender:** The online bid will be opened by a committee duly constituted for this purpose. Online bids (complete in all respects) received will be opened as mentioned at “Annexure: Schedule” in the presence of the bidder’s representative if available. Only one representative will be allowed to participate in the tender opening. The technical bid will be opened online first and it will be examined by a technical committee (as per specifications and requirements). The financial offer/bid will be opened only for the offer/bid that technically meets all requirements as per the specification and will be opened subsequently for further evaluation.
- 5.6 Acceptance/ Rejection of bids:** The Institute reserves the right to reject any bid not fulfilling the eligibility criteria. Submission of incomplete bid/ incomplete bid format would lead to rejection of bids. All documents required to be submitted should be part of the bid. If any document is not submitted, the bid will be treated as incomplete and this will lead to rejection. No communication in this regard will be entertained.
- 5.7 Eligibility Criteria:**
 - 5.7.1** Tenderer should be the manufacturer / authorized dealer.
 - 5.7.2** Non-compliance of tender terms, non-submission of required documents, lack of clarity of the specifications, contradiction between tenderer specification and supporting documents etc. may lead to rejection of the bid.
 - 5.7.3** All the bidders should fill all the sections of the compliance sheet (Annexure – I) after ensuring that the equipment complies with the tendered specification. An incomplete compliance sheet will lead to the rejection of the bid.
 - 5.7.4** An undertaking from the OEM is required stating that he has not been Blacklisted from any organization and would facilitate the tenderer regularly with technology/product updates and extend support for the warranty as well. (Ref. Annexure-II)
 - 5.7.5** Bidder must submit as an undertaking that he is not from the Country sharing the Land border with

India & Registration of Bidder with Competent Authority (Annexure - IV)

- 5.7.6 Class-I, Class-II local supplier and Non-Local supplier will be eligible to bid notified vide (DPIIT) Notification No.P-45021/2/2017-PP (BE-II) dated 4th June, 2020. An undertaking is required to be submitted (Annexure-V) failing which the bid will be rejected.
- 5.7.7 Bidder Must have a minimum 3 Years of experience in supplying of similar equipment in IITs/NITs/ Central Universities reputed institutions. All the details be filled in Annexure III and supporting purchase orders must be attached with the bid. Only experience of the supply of similar equipment will be considered. The bidder who do not satisfy this condition, their bids will be rejected.
- 5.7.8 An undertaking from the OEM is required stating that they would facilitate the tenderer regularly with technology/product updates and extend support for the warranty as well. All supplied items should be covered under warranty as mentioned in the tender document. Warranty service should be provided onsite at Hemvati Nandan Bahuguna Garhwal University (A Central University) for the duration of the warranty period. (Written assurance certificate must be provided on the letterhead of OEM/Dealer).
- 5.7.9 The bidder must provide the Price reasonability certificate (Annexure - VI).
- 5.7.10 Dealers participating in the tender should submit the Manufacturing Authorization Form from OEM and in case OEM is participating in the tender, OEM should submit proof of ownership (Annexure-VII).
- 5.7.11 Bidders must specify the Pre-Installation requirement (if any) in advance.
- 5.7.12 Either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can participate in the bidding process but both cannot bid simultaneously for the same item/product in the same tender. In such cases, the bid submitted by OEM will only be considered.
- 5.7.13 If an agent submits a bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.

5.8 Performance Security: The supplier shall be required to submit the performance security in the form of an irrevocable bank guarantee issued by any commercial bank for an amount which is stated in the “Schedule” of the tender document within 21 days from the date of receipt of the purchase order/LC and should be kept valid for 120 days beyond the date of completion of warranty period.

5.9 Force Majeure: The Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

- (i) For purposes of this Clause, “Force Majeure” means an event beyond the control of the Supplier and not involving the Supplier’s fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- (ii) If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

5.10 Risk Purchase Clause: In event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from the other source on the total risk of the supplier under risk purchase clause.

5.11 Packing Instructions: Each package will be marked on three sides with proper paint/indelible ink, the following:

- (i) Item Nomenclature
- (ii) Order/Contract No.
- (iii) Country of Origin of Goods
- (iv) Supplier's Name and Address
- (v) Consignee details
- (vi) Packing list reference number

5.12 Delivery and Documents:

Delivery of the goods should be made within a maximum period mentioned in the 'SCHEDULE' from the date of placement of the purchase order. Within 24 hours of shipment, the supplier shall notify the purchaser and the insurance company by cable/telex/fax/e mail the full details of the shipment including contract number, railway receipt number/ AAP, etc., and date, description of goods, quantity, name of the consignee, invoice, etc. The supplier shall mail the following documents to the purchaser with a copy to the insurance company:

- (i) Four copies of the Supplier invoice showing contract number, goods' description, quantity unit price, total amount;
- (ii) Insurance Certificate if applicable;
- (iii) Manufacturer's/Supplier's warranty certificate;
- (iv) Inspection Certificate issued by the nominated inspection agency, if any
- (v) Supplier's factory inspection report; and
- (vi) Certificate of Origin (if possible by the beneficiary);
- (vii) Two copies of the packing list identifying the contents of each package.
- (viii) The above documents should be received by the Purchaser before arrival of the Goods (except where the goods have been delivered directly to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses.

5.13 Liquidated Damages (L.D.):

If a supplier fails to execute the order in time as per the terms and conditions stipulated therein, it will be open to the purchaser to recover liquidated damages for delay in delivery and installation from the supplier at the rate 0.5% of the value of the order per week subject to a maximum of 10% of the total order value. The L.D. charges can be increased in case of gross violation of the Purchase Order terms as decided by the Director of the Institute.

5.14 Prices: The price should be quoted in BoQ format only. The offer/bid should be exclusive of taxes and duties, which will be paid by the purchaser as applicable. However, the percentage of taxes & duties shall be clearly indicated. The price should be quoted without custom duty and excise duty, since Hemvati Nandan Bahuguna Garhwal University (A Central University) is exempted from payment of Excise Duty and is eligible for concessional rate of custom duty. The necessary certificate will be issued on demand.

5.15 Progress of Supply: Wherever applicable, the supplier shall regularly intimate the progress of supply, in writing, to the Purchaser as under:

- (i) Quantity offered for inspection and date;
- (ii) Quantity accepted/rejected by inspecting agency and date;
- (iii) Quantity dispatched/delivered to consignees and date;

- (iv) Quantity where incidental services have been satisfactorily completed with date;
- (v) Quantity where rectification/repair/replacement effected/completed on receipt of any communication from consignee/Purchaser with date;
- (vi) Date of completion of entire Contract including incidental services, if any; and
- (vii) Date of receipt of entire payments under the Contract (In case of stage-wise inspection, details required may also be specified).

5.16 Resolution of Disputes: The dispute resolution mechanism would be as follows:

- (i) In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or differences shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the Hon'ble VC, Hemvati Nandan Bahuguna Garhwal University (A Central University), and if he is unable or unwilling to act, the sole arbitration of some other person appointed by him willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive, and binding on all parties to this order.
- (ii) In the case of a dispute between the purchaser and a Foreign Supplier, the dispute shall be settled by arbitration in accordance with the provision of sub-clause (i) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.
- (iii) The venue of the arbitration shall be the place from where the order is issued.

5.17 The place of jurisdiction would be Uttarakhand

5.18 Right to Use Defective Goods

If after delivery, acceptance and installation and within the guarantee and warranty period, the operation or use of the goods proves to be unsatisfactory, the Purchaser shall have the right to continue to operate or use such goods until rectifications of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.

5.19 Transfer and Subletting: The supplier shall not sublet, transfer, assign or otherwise part with the acceptance to the tender or any part thereof, either directly or indirectly, without the prior written permission of the Purchaser.

5.20 Supplier Integrity

The Supplier is responsible for and obliged to conduct all contracted activities in accordance with the Contract using state-of-the-art methods and economic principles and exercising all means available to achieve the performance specified in the contract.

5.21 Installation & Demonstration

The supplier is required to do the installation and demonstration of the equipment within two weeks of the arrival of materials at the Hemvati Nandan Bahuguna Garhwal University (A Central University), site of installation, otherwise, the penalty clause will be the same as per the supply of materials.

In case of any damage to equipment and supplies during the carriage of supplies from the origin of equipment to the installation site, the supplier has to replace it with new equipment/supplies immediately at his own risk. The supplier will settle his claim with the insurance company at his convenience. Hemvati Nandan Bahuguna Garhwal University (A Central University) will not be liable for any type of loss in any form.

5.22 Insurance (if applicable): For delivery of goods at the purchaser's premises Hemvati Nandan Bahuguna Garhwal University (A Central University), the insurance shall be obtained by the supplier from "warehouse to warehouse" (final destinations) on "All Risks" basis including War Risks and Strikes. The insurance shall be valid for a period of not less than 3 months after installation and commissioning.

5.23 Warranty:

- (i) Warranty period shall be (as stated at "Schedule "of this tender) from date of installation of Goods and acceptance at Hemvati Nandan Bahuguna Garhwal University (A Central University). The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall at its discretion make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests. The warranty should be comprehensive on site.
- (ii) The Purchaser shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall arrange to repair or replace the defective goods or parts within 7 days free of cost in Hemvati Nandan Bahuguna Garhwal University (A Central University). The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie on the Purchaser for the replaced parts/goods thereafter. The period for correction of defects in the warranty period is 07 days. If the supplier having been notified fails to remedy the defects within 07 days, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expenses and without prejudice to any other rights, which the purchaser may have against the supplier under the contract.
- (iii) The warranty period should be clearly mentioned. The maintenance charges (AMC) under different schemes after the expiry of the warranty should also be mentioned. The comprehensive warranty will commence from the date of the satisfactory installation/commissioning of the equipment against the defect of any manufacturing, workmanship and poor quality of the components.

5.24 Governing Language

The contract shall be written in English language. English language version of the Contract shall govern its interpretation. All correspondence and other documents pertaining to the Contract, which are exchanged by the parties, shall be written in the same language.

5.25 Applicable Law

The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction.

5.26 Notices

- (i) Any notice given by one party to the other pursuant to this contract/order shall be sent to the other party in writing or by cable, telex, FAX or e mail and confirmed in writing to the other party's address.
- (ii) A notice shall be effective when delivered or on the notice's effective date, whichever is later.

5.27 Taxes and Duties

Suppliers shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser. However, GST in respect of the transaction between the Purchaser and the Supplier shall be payable extra, if so stipulated in the order.

Hemvati Nandan Bahuguna Garhwal University (A Central University) is exempted from paying custom duty under notification No.51/96 (partially or full) and necessary "Custom Duty Exemption Certificate" can be issued after providing following information and Custom Duty Exemption Certificate will be issued.

HNBGU is exempted from paying Excise Duty and necessary Excise Duty Exemption Certificate will be provided for which following information are required.

- (i) Quotation with details of Basic Price, Rate, Tax & Amount on which ED is applicable.
- (ii) Supply Order Copy
- (iii) Performa-Invoice Copy.

Hemvati Nandan Bahuguna Garhwal University (A Central University) will issue a Custom Duty Exemption Certificate (CDEC) (for import items).

5.28 Payment:

- (i) For Indigenous supplies, 100% payment shall be made by the Purchaser against delivery, inspection, successful installation, commissioning, and acceptance of the equipment at Hemvati Nandan Bahuguna Garhwal University (A Central University) in good condition and to the entire satisfaction of the Purchaser and on production of unconditional performance bank guarantee as specified in Clause 4.8 of tender terms and conditions.
- (ii) For imported items Payment will be made through Wire Transfer. Wire Transfer will be established in favor of foreign Suppliers after the submission of performance security. The Wire Transfer will be established on the exchange rates as applicable on the date of establishment. For Imports, Wire Transfer will be opened for 100% value shall be released after the installation and demonstration of the equipment at the Hemvati Nandan Bahuguna Garhwal University (A Central University) site of installation in faultless working condition for period of 60 days from the date of the satisfactory installation and subject to the production of unconditional performance bank guarantee as specified in Clause 4.8 of tender terms and conditions.
- (iii) Indian Agency commission (IAC), if any shall be paid after satisfactory installation & commissioning of the goods at the destination at the exchange rate prevailing on the date of negotiation of LC documents, subject to DGS&D registration for restricted items.
- (iv) All the bank charges within India will be borne by the Institute and outside India will be borne by the Supplier.
- (v) GST Deduction at source as per Order/ notification of the Govt.
- (vi) GST No of HNBGU is
- (vii) HSN/SAC No of the items must be clearly mentioned in the quotation along with GST No.

5.29 Manuals and Drawings:

- (i) Before the goods and equipment are taken over by the Purchaser, the Supplier shall supply operation and maintenance manuals. These shall be in such details as will enable the Purchaser to operate, maintain, adjust and repair all parts of the works as stated in the specifications.
- (ii) The Manuals shall be in the ruling language (English) in such form and numbers as stated in the contract.
- (iii) Unless and otherwise agreed, the goods equipment shall not be considered to be completed for the purposes of taking over until such manuals and drawing have been supplied to the Purchaser.

5.30 Application Specialist: The Tenderer should mention in the Techno-Commercial bid the availability and names of Application Specialist and Service Engineers in the nearest regional office. (Ref. to Annexure-III)

5.31 Site Preparation: The supplier shall inform to the Institute about the site preparation, if any, needed for the installation of equipment, immediately after the receipt of the purchase order. The supplier must provide complete details regarding space and all the other infrastructural requirements needed for the equipment, which the Institute should arrange before the arrival of the equipment to ensure its timely installation and smooth operation thereafter. The supplier may visit the Institute and see the site where the equipment is to be installed and may offer his advice and render assistance to the Institute in the preparation of the site and other pre- installation requirements.

5.32 Spare Parts

The Supplier may be required to provide any or all of the following materials, notifications, and Information pertaining to spare parts manufactured or distributed by the Supplier. Such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and In the event of termination of production of the spare parts; Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested. Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spares. Other spare parts and components shall be supplied as promptly as possible but in any case within six months of placement of order.

5.33 Defective Equipment: If any of the equipment supplied by the Supplier is found to be substandard, refurbished, un-merchantable or not in accordance with the description/specification or otherwise faulty, the committee will have the right to reject the equipment or its part. The prices of such equipment shall be refunded by the Supplier with 18% interest if such payments for such equipment have already been made. All damaged or unapproved goods shall be returned at suppliers cost and risk and the incidental expenses incurred thereon shall be recovered from the supplier. Defective part in equipment, if found before installation and/or during warranty period, shall be replaced within 7 days on receipt of the intimation from this office at the cost and risk of supplier including all other charges. In case supplier fails to replace above item as per above terms & conditions, Hemvati Nandan Bahuguna Garhwal University (A Central University) may consider “Banning” the supplier.

5.34 Termination for Default

- (i) The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part:
 - a. If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the order, or within any extension thereof granted by the Purchaser or
 - b. If the Supplier fails to perform any other obligation(s) under the Contract.
 - c. If the Supplier, in the judgment of the Purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- (ii) For the purpose of this Clause:
 - a. “Corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.
 - b. “Fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Tenderer (prior to or after bid submission) designed to establish bid prices at artificial non- competitive levels and to deprive the Borrower of the benefits of free and open competition;”

- (iii) In the event the Purchaser terminates the Contract in whole or in part, the Purchaser may procure, upon such terms and in such manner, as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Purchaser for any excess costs for such similar Goods or Services. However, the Supplier shall continue the performance of the Contract to the extent not terminated.

5.35 Downtime: During the warranty period, not more than 1% downtime will be permissible. For every day exceeding permissible downtime, penalty of 1/365 of the 1% contract value will be imposed. Downtime will be counted from the date and time of the filing of complaint within the business hours. Supplier should clearly mention about their service set up in India (preferably in Northern part of India) for prompt service support. The manufacturer and/or their Indian representative must have at least three qualified and factory trained service engineer in India to be able to attend to service at Hemvati Nandan Bahuguna Garhwal University (A Central University) within 48 hours on submitting a complaint. Training certificates from the manufacturer have to be provided with the tender. During the warranty period, only factory trained and certified engineers are acceptable to attend the service.

In case the Equipment / System remains non-operational for more than 7 days then warranty period will be extended for the equivalent period for which Equipment /System remained non-operational. Warranty extension in such case shall be done without prejudice to any other Term & condition of the contract.

Hemvati Nandan Bahuguna Garhwal University (A Central University) would like to enter in service agreement through which Hemvati Nandan Bahuguna Garhwal University (A Central University) will receive replacement of defective spares/part (if any, that are not covered under warranty) immediately so as to minimize the down time. Order, if any, required to be placed for such spares/parts will be done by Hemvati Nandan Bahuguna Garhwal University (A Central University) in due course of time.

5.36 Training of Personnel (if applicable): The supplier shall be required to undertake to provide the technical training to the personnel involved in the use of the equipment at the Institute premises, immediately after completing the installation of the equipment if applicable.

5.37 Compliance certificate: This certificate must be provided indicating conformity to the technical specifications. (Annexure-I)

5.38 Genuine Pricing: The vendor is to ensure that the quoted price is not more than the price offered to any other customer in India to whom this particular item has been sold. Copy of the latest price list for the quoted item, applicable in India, must be enclosed with the offer (particularly to IIT/Institutes and other Government Organization).

5.39 Comparison of Bids:

1. Only the short-listed bids from the technical evaluation shall be considered for commercial comparison.
2. For comparison of prices, the prices quoted by the bidder for all the items taken together, as per Price Bid shall be considered.
3. The bids shall be evaluated on the basis of the total prices including all taxes and duties.
4. For the purpose of comparison of prices on equal basis, the prices quoted in foreign currency (if any) by bidders shall be converted to equivalent Indian Rupees. The exchange rate as on the

date of opening of financial bids shall be considered for the purpose of comparison.

5.40 Award of Contract

Hemvati Nandan Bahuguna Garhwal University (A Central University) shall award the contract to the eligible bidder whose technical bid has been accepted and determined as the lowest evaluated commercial bid based on the criteria mentioned above. However, Hemvati Nandan Bahuguna Garhwal University (A Central University) reserves the right and has sole discretion to reject the lowest evaluated bid.

In case more than one bidder happens to quote the same lowest price, Hemvati Nandan Bahuguna Garhwal University (A Central University) reserves the right to decide the criteria and further process for awarding the contract, decision of Hemvati Nandan Bahuguna Garhwal University (A Central University) shall be final for awarding the contract.

COMPLIANCE SHEET

TECHNICAL SPECIFICATION

Name of the Item: Make: Model:		Comply (Yes/No)	Supporting Page No.
Liquid Chromatography-Mass Spectrometry			
S. No.	Description		
Ultra High-Performance Liquid Chromatography (UPLC)			
1.	Pump <ul style="list-style-type: none"> • Must be an Ultra-High-Pressure quaternary gradient pump with an integrated degasser, autosampler, and column oven. Automatic purging of pumps should be software-controlled. The pump should be capable of mixing and delivering solvents at an operating pressure of 11000 psi or better. • The flow range must be 0.001-2 mL/min in 0.001 mL increments. • Flow rate precision: 0.075% RSD or better • Composition precision: ± 0.3 % RSD or better • Composition accuracy: ± 0.7 % absolute • Specify the number of ports and column switching valves for handling the columns simultaneously. The higher the number of ports per valve, the better. 		
2.	Auto Sampler <ul style="list-style-type: none"> • Must be capable of holding at least 90 samples of 1.5/2 mL capacity or better. • Must have cooler to control till 4°C • Carryover: $\leq 0.005\%$ or better • Leak sensors and automatic rack and vial recognition should be provided in each module for safety. 		
3.	Alternate Inlet System or Syringe Pump-Based Inlet <ul style="list-style-type: none"> • The LC and MS should be capable of running Stand-Alone i.e., MS with or without autosampler can be used while no chromatography is performed. • A syringe pump-based inlet system with optimum pumping speed is needed to deliver the sample to MS. Whatever spare parts are required must be supplied. • Specify if LC has an in-built alternate inlet system for delivering the samples to run MS Stand-Alone. 		
4.	Column Oven <ul style="list-style-type: none"> • Four or more columns with guard columns can be installed at a time and should be easily switchable during the multiple sample run. • The column temperature range should be less than 10 °C to 60 °C or better. Should have programmable temperature increments and high stability during the run. 		

5.	PDA Detector <ul style="list-style-type: none"> Should be provided with a standard flow cell Light Source: Lamp with minimum (2000 hr Warranty) Wavelength Range: 190nm – 600 nm or higher Maximum sampling rate 60 Hz or better Number of photodiodes: 512 or more Standard flow cell volume of <1µl for 10 mm path length or specify Specify cell temperature control range 		
6.	Injection volume 0.1 to 20 µL or better in 0.1 µL increment in partial or full loop mode.		
7.	Calibration Software-driven integrated calibrant delivery system + programmable divert valve, Automated Mass calibration and monitoring of instrument operation should be there IQ/OQ of the system should be quoted.		
	Ion sources and HRMS with MS/MS/QTOF (Quadrupole with Time of Flight) MS system		
8.	Mass Analyzer The Mass Analyzer should be equipped with a quadrupole analyzer and collision cell followed by a high-resolution time-of-flight mass analyzer system. Or any other equivalent HRMS technology with the MS/MS capabilities.		
9.	Vacuum system A suitable vacuum system with preferably one backup pump and turbo pump is needed to operate the instrument. An isolation valve must be fitted to the system to allow the source elements to be cleaned without breaking the instrument vacuum, maximizing instrument uptime. Normal operation and maximize the sensitivity of the instruments, vacuum should be optimum.		
10.	Ion Source It must have dedicated ESI sources that allow positive and negative ion detection. The source should be from the OEM and should be easily changed by the user without breaking Vacuum. ESI flow rate compatibility should be up to 2.0 mL/min or better. The source desolvation temperature should be $\geq 400^{\circ}\text{C}$.		
11.	Mass Accuracy 1 ppm or better for MS mode and 2 ppm or better in MS/MS mode on 10 consecutive repeat measurements.		
12.	Mass Range <ul style="list-style-type: none"> Quadrupole or any other equivalent Unit Mass resolution Analyzer mass range: up to 3000 m/z or better HRMS/TOF Mass range: ≤ 50 to 10,000 m/z or better. 		
13.	Resolution <ul style="list-style-type: none"> For HRMS/Q-TOF, the resolution should be $\geq 40,000$ FWHM for a wide m/z range and 55,000 FWHM or higher at select m/z values, while maintaining sensitivity. (It must be published on the technical brochure of the quoted model). Higher-resolution values can also be used as a clear performance metric to define the technical specifications of the HRMS/Q-TOF. 		

14.	Linear Dynamic Range In-scan dynamic range on co-eluting components should be of 4 orders or better.		
15.	Sensitivity <ul style="list-style-type: none"> The instrument should have picogram level sensitivity and needs to mention the sensitivity based on 1 pg reserpine or any suitable reference standard in all modes of analyses (positive and negative and MS and MS/MS modes) at its highest resolution. The sensitivity should be 1500:1 or better in MS/MS mode and 500:1 or better in MS mode while maintaining the maximum resolution. 		
16.	Data Acquisition <ul style="list-style-type: none"> Qualitative and quantitative analysis in ESI Source. The system should be able to perform MS and MS/MS together in the same run. Fast data acquisition (≥ 25 spectra/sec or better) in MS and MS/MS mode. The software should be capable of data acquisition whereby high and low collision energy data is acquired to provide fragmentation data for all detectable molecular ions in a single run. The instrument should have variable collision energy between low and high energy in the collision cell. 		
17.	Scan Functions <ul style="list-style-type: none"> The system must have full Scan MS, MS/MS. Should have a data acquisition process where both HRMS/TOF MS full scan data and MS/MS fragments are continuously generated in two independent, rapidly alternating data channels. 		
18.	Auto-Tune and Calibration <ul style="list-style-type: none"> The system should be capable of automated tuning of parameters across the system and calibrate itself for correct result output. Flexible automated optimization for small/labile molecule analysis should be present so that the system can be utilized for screening very small to large metabolites and contaminant residues without having to compromise in resolution or sensitivity. 		
19.	Polarity Switching The system should be able to switch between a positive and negative mode in a single run.		
20.	Temperature stability It should maintain mass accuracy even at temperature fluctuation.		
21.	Reference mass introduction Capable of internal reference mass correction without losing sensitivity.		
	Data Management System and software tools		
22.	Computer Platform <ul style="list-style-type: none"> Suitable latest-branded computer workstations preloaded at the manufacturing site with the software to ensure better connectivity and interfacing hardware and software for instrument control, data acquisition, and data processing. 1 PC for processing (with the latest configuration as of date: Xeon or 		

	<p>equivalent processor, 64 GB RAM, 8 TB SSD internal hard disk or better) computer workstations and all interfacing hardware and software for instrument control, data acquisition, data storage and data processing.</p> <ul style="list-style-type: none"> • Software for data acquisition, process and control of Mass Spectrometry. • Automated MS to MS/MS switching capabilities. • All hardware and software, including drivers, laser printers, and workstations, should be quoted. • The computer must control the mass spectrometer and LC system in an integrated fashion. <p>Note: All the license copies of necessary software should be provided with perpetual license.</p>		
23.	<p>Integrated software to control MS and LC together</p> <p>a) Automated Tuning & mass calibration to analyze small molecules, fragile ions to large molecules.</p> <p>b) Automated MS to MS/MS switching during a single run with user-selectable criteria.</p>		
24.	<p>Auto Calibration</p> <p>The Software shall be capable of Auto calibration.</p>		
25.	<p>Software tools for Advanced Data Processing</p> <p>Screening, Component Identification, & Structural Elucidation workflows. The structure interpretation tool is mandatory. The software should also have the capability to assign structures by taking fragment ion spectra into account and automatically calculating fragments based on algorithms. Also, it should have the following functions:</p> <p>h) Effective data mining tools for complex samples should be able to extract chemically related compounds while correlating isotopic fidelity & Mass Accuracy.</p> <p>i) Elemental formula generation capability and Compound Structure correlation with MS/MS data.</p> <p>j) All vendor needs to include specific, required software for Identification and verification, software to enable quick review of complex data sets, and Compound-based data browsing with dynamic links to spectra and chromatograms.</p> <p>k) The software should have a workflow for performing both semi-targeted (using the internal library) and non-targeted (using an External library such as ChemSpider or others) data processing.</p> <p>l) Software to automatically process complex chromatographic datasets composed of many components that may be incompletely separated from one another.</p> <p>m) All vendor needs to include specific, required s/w. Software to enable quick review of complex data sets Compound-based data browsing with dynamic links to spectra and chromatograms.</p> <p>n) Software should utilize a combination of advanced processing capabilities and powerful statistical and visualization tools to analyze complex MS data sets.</p> <ul style="list-style-type: none"> • The software should have all statistical features inbuilt. • It should provide targeted and untargeted batch feature extraction for mass spectrometric data. • The software should have the features to construct & maintain the <i>in-house</i> spectral library from the data acquired in the host laboratory. <p>o) A tool to generate fast in silico spectral matches to accurately annotate</p>		

	<p>MS/MS spectra.</p> <p>p) All perpetual software should be updated/upgraded time to time or whenever new release is there from the vendor for the next six years after the complete installation.</p> <p>q) All software should be supplied as perpetual licenses and can be installed on multiple computers for different users.</p>		
26.	<p>Library for HRMS</p> <ul style="list-style-type: none"> Comprehensive Spectral libraries like Metlin or other similar for Metabolomics should be quoted. The library should have a feature to freely update those molecules that are not available in the library and have the option. 		

Pre-Requisite for running the system

Gas Generator, Anti-vibration Table and Online UPS

27.	<p>Gas Generator</p> <p>A suitable Branded Nitrogen gas generator within the built compressor at the required purity, pressure, and flow rate for the Mass Spectrometer must be quoted. All the required accessories, such as arrangements for all gas supplies through the gas generator and Cylinder with all accessories for sources, collision cell, etc., must be quoted for the proper functioning of the system. The Nitrogen gas generator should have Nitrogen Purity (99%), Flow Rate (up to up to 35 L/min), Outlet Pressure (80-120 psi), and Operating Temperature (5°C to 35°C), so that there is no compromise/fluctuation in the functioning/operations, data quality of LC-HRMS/UPLC-Q-TOF system. Vendors should provide a list of recent supply of the same high-quality Nitrogen Gas Generator (in the past 5 years) with model details and modules supplied. The Gas Generator should be supplied with 6 Years of warranty.</p>		
28.	<p>Nitrogen Cylinders or Equivalent Cylinders</p> <p>Two (02) Nitrogen Cylinders with all required accessories. The Purification panel and double-stage regulator should be properly installed with a 6-year warranty. (If needed for the functioning of the machine with LC-HRMS with MS/MS capabilities).</p> <p>Note: If other Gas (such as Argon) is required for Collision Cell, then supply Two (02) Cylinders of the required Gas with all required accessories. The Purification panel and double-stage regulator should be properly installed with a 6-year warranty. (If needed for the functioning of the LC-HRMS with MS/MS capabilities).</p>		
29.	<p>Anti-vibration Table</p> <p>Antivibration table with sufficient space for keeping the LC-MS including PC and must have plugs for UPS, instrument and associated accessories.</p>		
30.	<p>Online UPS</p> <p>Online 10 KVA UPS (with stabilizer) with one-hour battery backup or better with 6 Years of warranty. Batteries should be included with standard warranty.</p>		
Other Accessories & Consumables			
31.	<p>Spares and Accessories for LC-HRMS</p> <ul style="list-style-type: none"> Vials: 1.5-2ml – 4000 No.s Vial Insert: 250 uL – 1000 No.s 		

	<ul style="list-style-type: none"> Syringe Filter: PTFE Filter, 13mm – 1000 No.s Syringe: – 1-10mL -1000 No.s Syringe: PTFE Filter, 13mm – 1000 No.s Lamps, Seals, Ferules, Tubing (metallic or plastic tubing), Valves, Nut and all other spares should be provided for proper installation of all columns and functioning of the instrument. All required traceable standards for Mass calibration and tuning, HPLC calibration should be provided. 5µl, 10µl, 20µl, Loops, Vacuum pump oil, etc. and any other material required to make the instrument functional should be provided. The LC and MS should be capable of running Stand-Alone i.e., MS with or without autosampler can be used while no chromatography is performed. In such case whatever spare is required must be supplied. 		
32.	Columns <ul style="list-style-type: none"> C8, (100 mm x 2.1 mm, 1.7 µm) column C18, (100 mm x 3 mm, 2.6 µm) column C18 (100 mm x 2.1 mm, 1.7 µm) column BEH C18 (100 mm x 2.1 mm, 1.7 µm) column or equivalent BEH C18 (50 mm x 2.1 mm, 1.7 µm column or equivalent ACE 18-pfp 100 mm x 2.1 mm, 2 µm column or equivalent HILIC LUNA 100mm x 3 mm x 3µm Column or equivalent <p>Note: Supply guard columns with all of the above-mentioned columns.</p>		
33.	Nitrogen Filters Nitrogen Filters – 2 No. s		
34.	Solvent Reservoir Solvent Reservoir bottles with tubing and solvent-resistant cap (04 Quantity).		
35.	Waste containers Solvent waste container waste with tubing with solvent-resistant cap (02 Quantity).		
36.	Calibration Software-driven integrated calibrant delivery system + programmable divert valve, Automated Mass calibration and monitoring of instrument operation should be there IQ/OQ of the system should be quoted.		
37.	Training Onsite training at the time of installation and further as and when required with mutual understanding. At least 6 days of training after installation and refresher sessions after 6-12 months, as upgradation will be there. Free registration for vendor's user workshops/symposia/ seminars for the next 5 years.		
	Terms and conditions		
38.	Warranty: Six (06) years comprehensive warranty with unconditional preventive maintenance on a full system and all accessories is a must, including third-party items such as PC, Nitrogen generators, Gas purification panel and regulator and UPS, and the same must be mentioned in the quotation by the		

	<p>vendor or principal. All parts including spares should be covered under the warranty and this fact should be clearly and explicitly specified in the tender document. The comprehensive 6-year warranty should cover:</p> <ul style="list-style-type: none"> • All parts of LC-MS, including probe, accessories, spares and labor on site • Free maintenance and service on site or at the factory with no cost, and • Regular upgradation of software • All third-party items such as PC, pump, syringe-pump, Nitrogen generator, Gas purification panel & regulator and UPS. • No Purchase Order will be raised for purchasing any parts of the LC-QTOF or equivalent instrument under the six-year comprehensive warranty. 		
39.	Single Vendor Solution: Both the Liquid Chromatograph and HRMS must be manufactured, supplied, and installed by a single/same vendor to provide seamless integration between the LC and MS.		
40.	Service and Support: Both the Liquid Chromatography and High-Resolution Mass Spectrometer must be fully supported by the supplier for at least 10 years. Services and spares support need to be provided.		
41.	Specification Sheet: A detailed specification sheet highlighting all the above specifications and all supportive documents need to be attached for all the claims in the specification mentioned		
42.	User Reference List: Vendors should provide a list of recent installations (in the past 5 years) model details and modules supplied. Vendors should provide the performance certificates from the users (at least 3).		
43.	Spares: The supplier should confirm the availability of spares for next 10 years from the date of installation.		
44.	Custom Clearance and Delivery: The supplier must ensure the custom clearance and delivery of equipment at the premises (or installation site) of HN BGU. The HN BGU shall provide the bank release order and GST charges details.		
45.	Turnover Certificate: The vendor must provide the turnover of the last three financial years to verify the financial standing.		

Signature of Bidder

Name: _____

Designation: _____

Organization Name: _____

Contact No.: _____

<< Organization Letter Head >>

DECLARATION SHEET

We, hereby certify that all the information and data furnished by our organization with regard to these tender specifications are true and complete to the best of our knowledge. I have gone through the specifications, conditions and stipulations in details and agree to comply with the requirements and intent of specification.

This is certified that our organization has been authorized (Copy attached) by the OEM to participate in Tender. We further certify that our organization meets all the conditions of eligibility criteria laid down in this tender document. Moreover, OEM has agreed to support on regular basis with technology / product updates and extend support for the warranty.

We, further specifically certify that our organization has not been Black Listed/De Listed or put to any Holiday by any Institutional Agency/ Govt. Department/ Public Sector Undertaking in the last three years.

The prices quoted in the financial bids are subsidized due to academic discount given to HNBSGU and the rates quoted are not more than those quoted to any other Institution in India or abroad during the last one year.

Name & Address of the Vendor/ Manufacturer / Agent	
Phone	
Fax	
E-mail	
Contact Person Name	
Mobile Number	
GST number	
PAN Number	
(In case of on-line payment of EMD) UTR No. (For EMD)	

(Signature of the Tenderer)
Name:

Seal of the Company

ANNEXURE – III

Bidder Must have 3 years of experience of supply of similar equipment's in reputed IITs/NITs/Central Universities/reputed institutions (Supporting Purchase Order's should be attached in the bid). Only experience of the supply of similar equipment will be considered. The bidder who do not satisfy this condition, their bids will be rejected.

Name of the organization	Name of Item	Name of Contact Person	Contact No.	Email

Name of application specialist / Service Engineer who has the technical competency to handle and support the quoted product during the warranty period.

Name of the organization	Name of Item	Name of Contact Person	Contact No.	Email

Signature of Tenderer

Name:_____

Designation:_____

Organization Name: _____

Contact No.: _____

<On Organization Letter Head>

ANNEXURE – IV

(For Goods/ Services Contract (If applicable))

No. _____ Dated: _

CERTIFICATE

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and hereby certify that the organization is not from such a country.

OR (whichever is applicable)

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and hereby certify that the organization is from (Name of Country) and has been registered with the Competent Authority. I also certify that the organization fulfills all the requirements in this regard and is eligible to be considered.

(Copy/ evidence of valid registration by the Competent Authority is to be attached)

Signature of Bidder/ Agent

Name: _

Designation: _____

Organization Name:

Contact No.: _

DECLARATION OF LOCAL CONTENT*[For Local Content of Products, Services or Works]*

(To be given on Company Letter Head – For tender value below Rs.10 Crores)

(To be given by Statutory Auditor/Cost Auditor/Cost Accountant/CA for tender value above Rs.10 Crores)

To,
 The Hon'ble Vice-Chancellor
 Hemvati Nandan Bahuguna Garhwal University (A Central University), 246174

Subject: Declaration of Local Content Tender reference No. _____
 Name of Tender/Work: _____

1. Country of Origin of Goods being offered: _____.
2. With reference to Order No. P- 45021/2/2017-PP(BE-II) dated 16-09-2020 of DPIIT, Ministry of Commerce and Industry, Govt. of India, we fall under the following category of supplier (please tick the correct category) for the items for which this tender has been floated and being bided.
 - Class I local supplier – has local content equal to more than 50%. Local contents added at _____ (name of location).
 - Class II local supplier – has local content more than 20% but less than 50%. Local contents added at _____ (name of location).
 - Non-local supplier – has local content less than or equal to 20%. Local contents added at _____ (name of location).
3. We are solely responsible for the abovementioned declaration in respect of category of supplier. False declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which we may can be debarred for up to 2 years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.

Signature & seal of the company Name

and address of the organization

.....

PRICE REASONABILITY CERTIFICATE
(to be submitted on firm's letterhead)

This is to certify that we have offered the maximum possible discount to you in our Quotation No. _____ dated _____ for (Currency) _____. We would like to certify that the quoted price are the minimum and we have not quoted the same item on lesser rates, than those being offered to HNBGU, to any other customer nor will do so till the validity of offer or execution of purchase order, whichever is later.

Signature of Tenderer Name: _____
Designation: _____
Organization Name: _____
Contact No. _____

MANUFACTURERS' AUTHORIZATION FORM

The Tenderer shall require the Manufacturer to fill in this Form in accordance with the Instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer]

.

Date: [insert date (as day, month and year) of Bid Submission] Tender No.: [insert number from Invitation for Bids]

To: [insert complete name and address of Purchaser] WHEREAS

We [insert complete name of Manufacturer], who are official manufacturers of [insert type of goods manufactured], having factories at [insert full address of Manufacturer's factories], do hereby authorize [insert complete name of Tenderer] to submit a bid the purpose of which is to provide the following Goods, manufactured by us [insert name and or brief description of the Goods], and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 5.22 of the Terms and Conditions, with respect to the Goods offered by the above firm.

Signed: [insert signature(s) of authorized representative(s) of the Manufacturer] Name: [insert complete name(s) of authorized representative(s) of the Manufacturer] Title: [insert title]

Duly authorized to sign this Authorization on behalf of: [insert complete name of Tenderer]

Dated on _____ day of _____, [insert date of signing]

Training Requirement

1.	Product Description	
2.	Attendees	
3.	No. of Days	

Financial Bid (Un-priced Bid)

Ser.	Item Description	Quantity	Unit
1	Main Item		
1.01	Liquid Chromatography-Mass Spectrometry	1.00	Nos.

Note:

1. Above cost shall include Supply & installation.
2. All product brochures, technical documentation/specifications should be enclosed with the technical bid.
3. All the products should be supplied with complete accessories required.
4. Warranty: 06 year from the date of installation.
5. Delivery Period days.
6. Validity of the bid.....days from the date of submission of Bid.
7. Mode of Shipment..... (Please specify Air or Sea)
8. Bidder must quote both Ex-works, FCA/ FOB & CIF/CIP value separately.
9. Country of Origin

Date:**Place:****Designation:****Signature of Bidder****Name:****Address:**